



The Arboretum Bulletin



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Victory Gardens for 1943

By BOB HELGESON

(EDITOR'S NOTE: We have been trying for some time to get a statement of the government's attitude toward the 1943 vegetable garden. The following note, taken from an article entitled, "Victory Gardens for 1943," by Bob Helgeson, ("Seed World" for November 20, 1942), is the first information that would indicate the federal viewpoint).

"IT IS SAID of democracies that with all their stumbling and bumbling, they come through in the pinches. If this is true, the 1943 Victory Garden program should become a classic example of proving the rule, for it will hit the nail squarely on the head and leave no one in doubt of what should be done. What is the 1943 Victory Garden program? Or rather, what will it be, for actual details are not yet available?

"In a few words, we think it will say: Everyone, urban or rural, should grow as much food for home consumption as individual circumstances will permit and persons not having adequate yard space should join in a community project.

"More particularly the Department of Agriculture and its Victory Garden Chairman, Mr. H. W. Hochbaum, are thinking of a seven-point program, which will probably read about as follows:

1. A state-wide garden conference patterned after the Washington garden conference last December, probably called by the State Extension Services, but attended by as wide a representation of private, trade and educational interests as possible. This conference to consider the facts and the situations before us for 1943; work out a program; set up working state committees.

2. To stimulate gardening, particularly to grow green, leafy vegetables, yellow vegetables and tomatoes wherever people have sufficient open sunny space and fertile ground.

3. When sufficient space is not available for a home garden without tearing up lawns, or for other reasons, to use available vacant space for community plot gardens where people can have 30x50 or 50x100-foot gardens.

4. The vegetables grown, if in sufficient quantity, are insurance to the family of an adequate supply of much needed protective foods.

5. To grow all the fruit possible.

6. To can and preserve, particularly surpluses of fruits and vegetables, for home use.

7. To seek the cooperation of the Extension Service and other agencies, to organize committees in metropolitan areas to help supervise and direct the garden effort, find available ground, etc."

Important and Interesting Weather Notes for the Northwest Gardener

By JOHN H. HANLEY

THOSE of us who have lived in Western Washington for at least a few years, and especially if we have come from other sections of the country, soon learn to appreciate the distinct type of climate that we have here.

The 1941 Year Book of the United States Department of Agriculture, titled "Climate and Man," sets forth some very interesting weather data which can be valuable to gardeners in the Northwest, and which better brings out the contrast between our climate and that of other sections. We present below some comments on significant data as taken from that publication.

1. *Average Date of Last Killing Frost in Spring—for Seattle—March 14.*

To anyone who is planting tender species or varieties this is a very significant date. Particularly is this so because our relatively low summer temperatures result in slow growth. Therefore, our tender garden plants must have a maximum length of time to develop their flowers and fruits before the harvest season comes. Such things as tomatoes, cucumbers, squash, peppers and the like fall into this category of tender types. If the gardener can plant them outside at an early date without fear of frost, so that they have a long growing season, then the chances of harvesting the maximum crop will be enhanced.

As written above, the average date of the last killing

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An Arboretum Store

Arboretum Unit No. 2 announces the opening of a store which will remain open through the holiday season, located at Masts, at 5th and Union, Seattle.

This Arboretum group is selling winter corsages, charm strings, wreaths, Christmas arrangements using figurines, as well as beautifully packed holiday cartons of greens for shipping, all of which make charming gifts. For sale also will be Victory shopping bags in patriotic colors. Orders will be taken for the book, being distributed by the Arboretum, "Trees and Shrubs for Pacific Northwest Gardens, What to Grow and How to Grow Them," by John A. Grant and Carol L. Grant. Price, \$3.65, including sales tax and postage. Checks payable to the Arboretum Foundation, 5532 White Building, Seattle.

Further details regarding the store may be had by telephoning the office (Seneca 0920) or Mrs. George T. Williams (Kenwood 4535).

Important Weather Notes (Continued From Page One)

frost for Seattle is given as March 14. This sounds very early to those of us who have handled plants in this section. Actually, one cannot accept this date and use it for *any* limited local area, even within the city of Seattle. For example, the bluffs above Puget Sound as well as those above Lake Washington are warmer than nearby valley areas, even within the city. Hence, while it might be safe for a gardener on the bluffs to plant tender varieties on or shortly after March 14, it would still be too early for the same species to be placed outside in an adjacent lowland garden area.

Without having the benefit of exact data, it would appear that April 15 (one month later) would be a better date for the inland gardener to use as a guide. However, even the April 15 date moves up to an appreciable degree the planting out season, as we have considered it in the past, and as it pertains to tender annuals, whether they be ornamental or vegetable varieties.

2. Average Date of First Killing Frost in Fall.

The date for Seattle was found to be November 24. Again, as in the case of the first frost-free date in the spring, this seems to extend the season appreciably. At the Arboretum we have gone on the assumption that October 10 is the last frost-free date. From our experiences this fall we know very well that frosts occur at the Arboretum well in advance of the time that they occur even in the nearby Washington Park and Laurelhurst residential districts.

At this writing (on November 4) there has been no frost on the crest of Laurelhurst hill, and yet the bush beans, cucumbers and peppers have already been affected in the vegetable garden at the Arboretum. This information is presented to show that, whereas a hilltop overlooking the sound or lake might remain frost-free well into November, the lowland areas, even those that are close by, experience frost much earlier. Thus, the gardener in the lowlands cannot rely upon such a late season as the data from the Year Book would indicate, and he or she must therefore execute vital garden procedures accordingly.

Here, specifically, is an example of how the data can be used in regulating vital garden practices. The hilltop gardener might well expect to harvest a crop of Golden Bantam sweet corn from a July 15 planting, but a lowland gardener would have to have the seeds in the ground at least two weeks (preferably one month) earlier, in order to have the ears develop to maturity.

3. Average Annual Period Without Killing Frost—255 Days.

To the novice this would seem like an extremely long period. Undoubtedly it is, but again one must consider the location of any individual garden. The length of the growing season which is actually what is meant by the above, will depend upon whether the garden is on a hilltop, near the water, or in an inland valley. Furthermore, these data are confusing because there can be no expression in them of the actual rate of growth as influenced by other important environmental conditions, such as temperature and light. The comparatively low summer temperatures that we have here in the Puget Sound region retard the growth rate of plants. Hence, a longer growing season is needed here than would be required in Eastern Washington, for example. As a matter of fact, and because of low summer temperatures, the development of flowers and fruits on certain species and varieties is almost completely eliminated, even though the plant develops luxuriantly in a vegetative way.

Because of the temperature during the growing season, and in spite of the considerable length of said season, it behooves every gardener to place tender varieties in the ground as soon as possible in the spring and to fertilize them well so that they develop rapidly.

4. Average Annual Precipitation.

There seems to be quite a variation even within King County. For example, Seattle shows a 40-year average of 31.8 inches per year, while Kent, only a few miles away, has 36.9 inches; Snoqualmie Falls has 55.7 inches, and Vashon Island, 43.5 inches per year. Thus it can be seen that there is a considerable difference even within relatively short distances.

5. Average Number of Hours of Sunshine Daily.

For residents of the Puget Sound region it is interesting to compare the number of hours of daily sunshine of this region with other parts of the United States. Seattle and its environs get approximately two and one-half hours per day during the period from December through January. The figure for Chicago is slightly over four hours per day during the same period, for the southern tip of Florida, about seven hours, and for southeastern California and southern Arizona, it is eight and one-half hours. During the summer season, June through August, the average number of hours of sunshine for a day reaches a high of nine hours in Seattle. During the same period Chicago gets a little more than ten hours each day, while southeastern California and southern Arizona receive twelve and one-half hours.

Along this same line the average annual number of clear days for Seattle is 80, while Chicago has 100 and the California-Arizona area has 280. On the other hand, Seattle really comes to the fore when one considers the average number of cloudy days. Out here we have approximately 180 of them. In Chicago the figure is about 130, while the aforementioned California-Arizona region has an average of only 20 cloudy days each year.

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Notes from the Vegetable Demonstration Garden

By JOHN H. HANLEY

1. *Pumpkins, Squash, Cucumbers.* The plants should be started early and should be well developed by transplanting time (April 1 to April 15, for western Washington). Of course, it will be possible to harvest a reasonably good crop even if *seeds* are planted in the ground during that period. But the best yields will be taken from early-started plants. A cold-frame, hot-bed, or greenhouse may be used for early starting.

In planting, dig a hole 14 to 16 inches deep and about 12 inches wide; place a medium sized shovel of decayed barnyard manure in the bottom of it; add two handfuls of commercial fertilizer before filling with the soil that was thrown to one side; then place either the seeds or the plants into the mass of unfertilized soil now filling the top of the prepared area.

Varieties. For pumpkins the variety Small Sugar is excellent. For squashes it is best to minimize the summer types and grow more winter varieties such as Danish, Acorn and Buttercup. For cucumbers, the Boston Pickling, White Spine and Straight Eight will produce very well.

2. *Tomatoes.* Prepare the soil in individual hills as for pumpkins above. Purchase strong, healthy seedlings that have been once transplanted into a flat or into a pot. The potted plants will be more expensive but it will pay to use them if you are planting late. However, the strong transplants from flats will develop beautifully and give an excel-

lent crop if planted out during the period April 20 to May 10.

Although it is sometimes recommended that a starter solution be used when tomatoes are being planted, we found that they developed very satisfactorily without it, provided the soil was prepared as above (under pumpkins).

Pruning and Training. As a result of our demonstration, one must conclude that pruning and training are absolutely necessary in western Washington. The plants can be trained to one, two, three, or even four stems. If more than one stem is desired, it is usually necessary to pinch out the tip of the young plant as soon as it takes hold following transplanting. Then select the strongest side branches for training and keep all side shoots picked out as they develop. A single, strong stake that is six feet tall will suffice for support, no matter how many or how few branches are being trained. Tie the branches loosely against the stake to hold them in place.

The single-stemmed plant has a slight advantage over the two, three, or four-stemmed ones in that the gardener can usually expect a somewhat earlier yield from the first cluster of flowers which appears on the top of the shoot; this cluster is usually removed in pruning to produce a multiple-stemmed plant.

Varieties. From observation on several gardens the choice varieties for western Washington are Marglobe, Break o' Day, Scarlet Dawn and Chalk's Early Jewel.

3. *Corn.* Use Golden Bantam for the early and late crops and Golden Cross Bantam for the main crop. Thin out the hills to three stalks and keep suckers pulled off as they develop. Plant at two-weekly intervals beginning May 1 and ending July 15. Our July 23 planting failed to mature.

In keeping with the general recommendations for using fertilizers economically, it is very convenient and efficient to apply a commercial type locally around each hill after the young plants are up six or seven inches. The application can best be made in a shallow, circular trench, two or three inches deep.

4. *Potatoes.* The variety Netted Gem is a fine one for the late crop. Irish Cobbler is a fair early variety. The White and Early Rose varieties are also used extensively and Earliest of All is a nice looking type. For our future use we would choose Netted Gem for the late crop and either White Rose or Irish Cobbler for early production.

Irish Cobbler developed considerable black leg, emphasizing the point that potatoes should be treated as soon as possible after the seed is cut. One should not let the cut sections lie too long before planting. Cut the seed potatoes, treat them and let the cut faces harden for two or three days before planting.

5. *Cabbage.* Copenhagen Market and Golden Acre are both good for the early crop and Danish Ball Head is fine for late in the season. Purchase strong transplants and place a tar-paper ring or square around them as soon as they have been planted and watered. Planting can be started in March and, with the two early varieties mentioned above, it will be more efficient to plant a few every two weeks until May 15, than to have them all mature at one time. Put all plants of the late variety in at one operation.

Fertilize by individual applications around each plant.

6. *Peppers.* The variety California Wonder developed very satisfactorily in the demonstration garden, though it would have been much improved had strong plants been placed outside on or about May 1. Individual fertilization is satisfactory.

Peppers need the hottest, driest part of the garden if they are to develop most rapidly.

A Stem Canker of Dogwood and Madrona

By D. E. STUNTZ and C. E. SELISKAR

(Continued from November Issue)

decided contrast to the normal orange-red outer bark, but cankers on dogwood are much less conspicuous because of the dark color of dogwood bark. The diseased condition of a stem can quickly be shown by cutting into the inner bark. The infected bark tissue presents a definite discoloration, ranging from light brown to dark brown or purplish black, as contrasted to the white or cream colored healthy tissue. The dead bark at the center of an old canker usually cracks and may drop off.

Cultures were made of diseased tissue taken from a large number of cankers on both dogwood and madrona. From these cultures one fungus was consistently isolated, and was identified as *Phytophthora cactorum* (L. and C.) Schroet. *Phytophthora cactorum* is an omnivorous fungus having a wide host range, attacking species of *Malus*, *Pyrus*, *Juglans*, *Eriobotrya*, *Prunus*, and many others. This is the first time, however, that it has been reported on Pacific dogwood or madrona.

Bits of mycelium from pure cultures of the fungus were inoculated into the bark of healthy trees of both dogwood and madrona. Within three months there developed about the point of inoculation cankers that were identical in nature and appearance with those associated with the disease. Controls, inoculated with sterile agar only, failed to develop any sign of a canker. From the tissue of the artificially induced cankers *Phytophthora cactorum* was reisolated, and proved to be identical with the original isolant. From the foregoing evidence it can be concluded that *Phytophthora cactorum* (L. and C.) Schroet. is the cause of a disease which produces cankers on the stem of Pacific dogwood and madrona.

An attempt was made to determine whether scarification of the cankers would control the disease. A strip of healthy bark about one and a half inches wide was removed all around the margin of the canker, exposing the canker. All discolored tissue, including discolored sapwood, was carefully removed, and the diseased bark of the canker was shaved away. Some cankers were left without further treatment, others were painted over with Bordeaux paint. Although not enough time has elapsed since this treatment to make any statement as to its ultimate success or failure, the further spread of the treated cankers has thus far been halted. The fact that the fungus does not appear to extend beyond the discolored tissues, in addition to its apparent susceptibility to heat and dryness, should make scarification of the cankers a relatively simple process, and may offer the hope of saving many valuable ornamental trees, or at least of prolonging their life.

7. *Onions.* The varieties Yellow Globe Danvers and White Sweet Spanish are highly satisfactory, the former being especially good for a winter keeper. Onions can be handled in any one of three ways; namely, from seeds, seedlings and sets. Seeds can be started indoors in late winter and the seedlings placed in the ground in April. Sets can be planted out-of-doors as soon as the soil can be worked and it is best to rely upon them for green onions only, since they are prone to produce flowers and seeds unless small sets are used.

Fertilizer can be applied along the onion rows.

(Continued in January Issue)

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